

Notice of Allowability

Application No.

09/583,677

Examiner

Michael Y. Won

Applicant(s)

NOVAES ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Decision on Appeal by the BPAI filed August 29, 2006.
2. ☒ The allowed claim(s) is/are 1-3,6-17,19,22-41,43,46-65,67 and 70-76.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

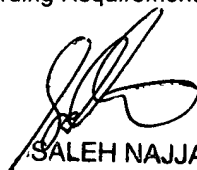
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |



SALEH NAJJAR
SUPERVISORY PATENT EXAMINER

DETAILED ACTION

1. This action is in response to the Decision on Appeal by the Board of Patent Appeals and Interferences filed on August 29, 2006.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Blanche E. Schiller (Reg. No. 65,670) on September 25, 2006.

3. The application has been amended as follows:

1. (Currently Amended) A system of managing clusters of a computing environment, said system comprising:

a registry component to provide global data storage for global data of a cluster of said computing environment, said cluster including a plurality of nodes of said computing environment and said global data comprising configuration data of multiple nodes of the plurality of nodes;

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a configuration component to maintain data locally on at least one node of said plurality of nodes, and to store global data in said registry component;

a liveness component to provide status of one or more communications paths of said cluster, said liveness component being dependent upon said registry component and said configuration component;

a group services component to provide one or more services to one or more other components of said cluster, said group services component being dependent on said registry component, said configuration component and said liveness component; and

a resource management component to provide communications to one or more resource controllers of said cluster, said resource management component being dependent on said registry component, said configuration component and said group services component;

wherein said configuration component is responsible for starting one or more components of said registry component, said liveness component, said group services component and said resource management component, and

wherein said one or more components are started by the configuration component in a defined order comprising starting the registry component, and then the liveness component, the group services component and the resource management component.

18. (Currently Cancelled)

19. (Currently Amended) The system of ~~claim 18~~ claim 1, wherein the starting of one or more components satisfies at least one of one or more functional dependencies between the one or more components and one or more data dependencies between the one or more components.

20. (Currently Cancelled)

21. (Currently Cancelled)

22. (Currently Amended) The system of ~~claim 21~~ claim 1, wherein said registry component begins a first phase of its initialization, in response to being started, said first phase of initialization comprising determining at least one copy of a global configuration database to be used in the starting.

27. (Currently Amended) A method of managing clusters of a computing environment, said method comprising:

providing, via a registry component, global data storage for global data of a cluster of said computing environment, said cluster including a plurality of nodes of said computing environment and said global data comprising configuration data of multiple nodes of the plurality of nodes;

maintaining, via a configuration component, data locally on at least one node of said plurality of nodes, and to store global data in said registry component;

providing, via a liveness component, status of one or more communications paths of said cluster, said liveness component being dependent upon said registry component and said configuration component;

providing, via a group services component, one or more services to one or more other components of said cluster, said group services component being dependent on said registry component, said configuration component and said liveness component; and

providing, via a resource management component, communications to one or more resource controllers of said cluster, said resource management component being dependent on said registry component, said configuration component and said group services component; and

starting, via said configuration component, one or more components of said registry component, said liveness component, said group services component and said resource management component, wherein said one or more components are started by the configuration component in a defined order comprising starting the registry component, and then the liveness component, the group services component and the resource management component.

42. (Currently Cancelled)

43. (Currently Amended) The method of ~~claim 42~~ claims 27, wherein the starting of one or more components satisfies at least one of one or more functional dependencies between the one or more components and one or more data dependencies between the one or more components.

44. (Currently Cancelled)

45. (Currently Cancelled)

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46. (Currently Amended) The method of ~~claim 45~~ claim 27, further comprising beginning, by said registry component, a first phase of its initialization, in response to being started, said first phase of initialization comprising determining at least one copy of a global configuration database to be used in the starting.

51. (Currently Amended) At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of managing clusters of a computing environment, said method comprising:

providing, via a registry component, global data storage for global data of a cluster of said computing environment, said cluster including a plurality of nodes of said computing environment and said global data comprising configuration data of multiple nodes of the plurality of nodes;

maintaining, via a configuration component, data locally on at least one node of said plurality of nodes, and to store global data in said registry component;

providing, via a liveness component, status of one or more communications paths of said cluster, said liveness component being dependent upon said registry component and said configuration component;

providing, via a group services component, one or more services to one or more other components of said cluster, said group services component being dependent on said registry component, said configuration component and said liveness component;
and

providing, via a resource management component, communications to one or more resource controllers of said cluster, said resource management component being dependent on said registry component, said configuration component and said group services component; and

starting, via said configuration component, one or more components of said registry component, said liveness component, said group services component and said resource management component, wherein said one or more components are started by the configuration component in a defined order comprising starting the registry component, and then the liveness component, the group services component and the resource management component.

66. (Currently Cancelled)

67. (Currently Amended) The at least one program storage device of ~~claim 66~~ claim 51, wherein the starting of one or more components satisfies at least one of one or more functional dependencies between the one or more components and one or more data dependencies between the one or more components.

68. (Currently Cancelled)

69. (Currently Cancelled)

70. (Currently Amended) The at least one program storage device of ~~claim 69~~ claim 51, wherein said method further comprises beginning, by said registry component, a first phase of its initialization, in response to being started, said first phase of

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initialization comprising determining at least one copy of a global configuration database to be used in the starting.

Allowable Subject Matter

4. The following is an examiner's statement of reasons for allowance:

Prior art of record do not teach, disclose, or suggest either singly or in combination "wherein said one or more components are started by the configuration component in a defined order comprising starting the registry component, and then the liveness component, the group services component and the resource management component" as recited in the amended claim 1 and similarly recited in amended claims 27 and 51.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Y. Won whose telephone number is 571-272-3993. The examiner can normally be reached on M-Th: 7AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on 571-272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michael Won



September 25, 2006



SALEH NAJJAR
SUPERVISORY PATENT EXAMINER